

FETF 62862

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Vasel et al. )  
Serial No.: 09/289,258 )  
Filed: 4/9/99 )  
For: NON-LETHAL PROJECTILE )  
FOR DELIVERING AN )  
INHIBITING SUBSTANCE TO )  
A LIVING TARGET )  
Group Art )  
Unit: 3641 )  
Examiner: Tudor, H. )

DECLARATION PURSUANT TO 37 C.F.R. § 1.132

Hon. Commissioner for Patents  
Washington, D.C. 20231

Sir:

I, Charlie Campe, declare as follows:

1. I am currently a Sergeant with the San Diego Sheriff's Department, San Diego, California. I have 29 years of experience in law enforcement including 18 years with the San Diego Sheriff's Department and 11 years experience with the San Diego Harbor Patrol. For the last 4 years, I have been the Less Lethal Coordinator for the San Diego Sheriff's Department in charge of implementing the less-lethal program, including officer training.

2. I have worked about 4 years in the area of

less-lethal weapons for tactical and patrol use and am extremely knowledgeable in the field of less-lethal weapons. I have approximately 24 hours of training with less-lethal weapons.

3. I am familiar with less-lethal weapons as an alternative to lethal force weapons. Less-lethal weapons are used in situations where lethal force is not warranted in order to stop and detain a person before lethal force is required. In some uses, less-lethal devices may actually be lethal. Non-lethal weapons serve the same function as less-lethal weapons, but do not result in death with any use of the weapon. Thus, less-lethal and non-lethal weapons are an alternative to lethal weapons.

4. In law enforcement, there is a well known need that has existed for many years for a non-lethal and less-lethal device that can be safely and easily used by patrol officers in many different situations and that is an option to lethal force.

5. I have tested and used many less-lethal and non-lethal devices, such as chemical irritant sprays, tasers, tear gas, bean bag shotguns, and 37 mm projectile launchers. Although each of these devices can be effective in specific situations, each of these devices has limited use and is not effective for everyday use by a patrol officer.

6. For example, hand held tasers require that the officer be in close proximity to the target and are

single shot devices. A taser is a device that shoots two tethered electrodes that contact a target and administer and electrical charge. If the officer misses or the taser does not function properly, lethal force may be the only option remaining. Bean bag shotgun rounds are fired from conventional shotguns and at close range (for example, less than 20 feet) have the potential to be lethal. 37 mm projectile launchers that launch chemical agents or rubber bullets, for example, are simply too big to be effectively used by a patrol officer. Such launchers limit the mobility of the officer and are not effective in close range situations. Like the bean bag shotgun rounds, the 37 mm projectiles are launched using an ignitable black powder propellant. Thus, these products do not satisfy the recognized need in the law enforcement community for a safe, easy to use and effective non-lethal projectile.

7. There has also been a longstanding need to provide a non-lethal device for patrol use that will deliver a chemical agent or irritant that may be used in many applications that is easy to use, easy to clean up, effective, and is non-lethal.

8. It is well known that chemical agents can be very effective in a less-lethal device. For example, aerosol spray canisters (such as OC spray) and tear gas devices deliver chemical agents to a suspect. However, OC spray canisters must be used in close proximity to the target and require that the target be hit in the face in order to contact the mouth and/or eyes. This places the officer in a position of an increased risk of harm. Tear

gas is not easily confined making it difficult to target a single person within a crowd or a moving target. Tear gas also takes time to settle, lingering in the air and drifting with the winds, which may affect more persons than the intended target(s).

9. Since the known chemical agent non-lethal have inherent limitations and are not practical in many situations, none of these products satisfies the need for an effective chemical agent non-lethal described above.

10. The Pepperball product is a relatively new product for law enforcement use in less-lethal and non-lethal situations. The Pepperball product is commercially available from Jaycor Tactical Systems of San Diego, CA. The Pepperball product delivers a powdered pepper substance (for example, powdered oleoresin capsicum or "powdered OC") within a frangible projectile fired by a compressed air launcher, such as a paintball launcher. When the projectile impacts the target, the projectile shatters releasing the powder irritant in a cloud that surrounds the target. Powders in the cloud are then inhaled by the target. This powdered cloud also gets into the target's eyes. This cloud then disperses quickly, allowing the law enforcement officer to apprehend the person without requiring the use of special equipment, such as a mask or gloves.

11. I first became familiar with Pepperball product in about October 1999 at a demonstration led by Craig Beery of Jaycor Tactical Systems. I was

subsequently trained and certified as a Pepperball instructor to train other officers within the San Diego County Sheriff's Department. Additionally, my team of trainers have trained about 700 officers on the proper use of the Pepperball product.

12. The Pepperball product provides a solution to these longstanding needs described above. The Pepperball product solves the problems of the known less-lethal devices. The advantages and features provided in the Pepperball product have been sought for years in the law enforcement community, and to my knowledge, until the Pepperball product was introduced, no satisfactory solution was available.

13. I believe there are several reasons why the Pepperball product is so effective. One reason the Pepperball is effective is that the product delivers a chemical irritant to the target within a projectile from a distance. This allows an officer to launch the Pepperball product at a target from safe distances, so that the risk of harm to the officer is reduced. For example, the Pepperball product can be launched from 20-30 feet, as well as from 20 feet to point blank range. In contrast, an officer must be in close proximity to the target when using a taser or OC spray canisters. Since the officer is in close proximity to the suspect, if the non-lethal device does not work and the suspect attacks the officer, the officer may be forced to use deadly force or risk personal injury.

14. Another reason the Pepperball product is effective is that it delivers a powdered irritant. When the projectile impacts the target, the projectile shatters releasing the powdered irritant as a cloud that forms around the target. Thus, the target is forced to inhale the powdered irritant.

15. Since the irritant is a powder and forms a cloud, the suspect does not have to be hit in the face to be effective. Therefore, in use, our officers are specifically trained to target areas of the body (such as the chest) and never to target the face. For example, the suspect can be struck in the chest or the leg and the Pepperball product still works effectively. This is because the powder immediately creates a cloud on impact that expands so that the suspect breathes the powdered irritant. In contrast, OC spray is not very effective if the suspect is sprayed on a part of the body other than the face and/or eyes since the spray will only soak the sprayed area, not disperse or expand as a cloud.

16. Since the irritant is a powder, the Pepperball does not have to directly hit the suspect to be effective. A wall, ceiling or other object near the suspect can be targeted to form the powdered cloud. Again, the cloud forms so that the suspect inhales the powdered irritant. In comparison, OC sprays and tasers require that the officer be in close proximity to the suspect and directly hit the suspect, thus, increasing the risk of harm to the officer.

17. The powdered irritant also quickly settles after use. For example, after forming the cloud, the powdered cloud settles on the suspect or the ground. In comparison, tear gas remains in the air for some time. Officers must either wait until the gas is gone or worn off or must wear a gas mask to detain the suspect.

18. Also, the powder irritant easily cleans up off of the suspect since the powder does not stick to the suspect's skin and clothes upon use. The suspect can simply be brushed or dusted off once the suspect is detained. In comparison, a liquid OC spray sticks to the suspects face, body and clothes. With chemical sprays, officers often will have to flush the suspects face and eyes, and even possibly provide medical treatment to the suspect prior to handling the suspect or bringing the suspect to the Police Station. This may require special equipment, such as masks or gloves when handling the suspect.

19. To my knowledge, the Pepperball product is the first less-lethal product on the market for patrol use that delivers a powdered irritant to the suspect within a projectile. Other chemical agent less-lethals involve the use of fluid irritant (OC spray) or gas irritants (tear gas), which are not nearly as effective as the powdered irritant of the Pepperball product.

20. I also believe that the Pepperball product is as close as truly non-lethal as a weapon system can be. I can not state that the Pepperball product would be non-lethal in all possible uses, but with proper usage,

the Pepperball product appears non-lethal. With the exception of chemical sprays, such as OC sprays, all other devices are less-lethal in that they only reduce the likelihood of death in use.

21. I also believe that even if a product existed that was similar to Pepperball, but delivered a liquid or fluid irritant, that this liquid irritant would not be nearly as effective as the powder-filled Pepperball. First, the liquid irritant would not disperse and create a cloud, like the powdered irritant. The liquid irritant would splatter and stick to the part of the suspect that is struck. In order to be effective, the liquid product would have hit the suspect in the face, increasing the risk of serious injury to the suspect. Also, an indirect hit would not be effective, again, since a cloud is not formed that the suspect will breathe. Thus, a liquid projectile impacted with the ground or a ceiling would be entirely useless. And, the liquid irritant is more difficult to clean up.

22. Another reason I believe that the Pepperball is effective is that it may be launched from a compressed air launcher or a paintball gun. This allows for easy operation and simple training. Many more officers can be trained using a paintball gun, since it does not have the recoil or kick that a shotgun or a 37 mm projectile launcher provides.

23. Also, since the Pepperball launcher is similar to a conventional paintball launcher, the Pepperballs may be launched at close range, as well as



long range. Bean bag shotgun rounds and 37 mm projectile launchers can be fatal at close range since they impact with considerably higher kinetic energy.

24. Another reason the Pepperball product is effective is that it provides a kinetic impact. This impact is strong enough that the target is stunned, but not strong enough to seriously injure the target. For example, the kinetic impact of the Pepperball is much less than that of a bean bag shotgun round. Therefore, the Pepperball product is safe to launch, even at point blank range, whereas the bean bag shotgun can be lethal at ranges less than 20 feet. Furthermore, a suspect hit with a bean bag shotgun round must receive medical treatment to determine if the suspect has been injured internally (such as broken bones) prior to being brought to the Police Station. When used properly, the Pepperball product only has enough force to cause welts, not internal damage or death.

25. Since the kinetic impact is strong enough to stun or slow the suspect, particularly when multiple projectiles are fired in close succession, this stunning effect allows the powdered cloud to be easily inhaled by the suspect. This kinetic impact is enough to stun the suspect without seriously injuring the suspect.

26. To my knowledge, the combination of kinetic stunning impact and pepper irritant in a single product is unique to the Pepperball product. Thus, I am not aware of a less-lethal or non-lethal system, other

than the Pepperball product, that combines both kinetic impact and pepper irritant in the same system.

27. Yet another reason the product is effective is that multiple projectiles may be fired at a target in short succession. The semi-automatic compressed air launchers used by our department are fired every time the user pulls the trigger. I am also aware of other compressed air launchers sold by Jaycor Tactical Systems that automatically fire many projectiles per second. In either case, by impacting the target multiple times within a short period of time, an enhanced kinetic impact is provided on the suspect, which also increases the amount of powder in the cloud and the size of the powder cloud.

28. In comparison to the known less-lethal devices, the Pepperball product fills the long term need in law enforcement for a less-lethal device that has many applications, is easy to use, and is effective. This device is also as closer to being truly non-lethal than any other effective product on the market.

29. In comparison to known chemical agent less-lethal devices, the Pepperball product satisfies the long term need in law enforcement to provide a non-lethal that delivers a chemical irritant that may be used in many applications, is easy to use, and is effective, without impacting the officers and with easy decontamination of the suspect.

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30. At the San Diego Sheriff's Department, we have been very pleased with the results of the Pepperball product. Our department currently has over 200 Pepperball launchers in use. In use, the Pepperball product has been very effective in a variety of situations. Due to the Pepperball product's effectivity, we plan to continue the use of the Pepperball product.

31. Furthermore, I am not aware of any other projectile devices on the market for patrol use other than the Pepperball product, that use an inhibiting substance in powder form. Other products on the market delivering an inhibiting substance are liquid-based.

32. As I am advised I must, I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patents issuing thereon, or any patent to which this Declaration is directed.

  
Charlie Campe

Dated: 7-15-01, 2001

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